WHAT WE CLAIM IS:

1. A method for predicting a response to an epidermal growth factor receptor-directed therapy in a human subject, the method comprising the step of assaying a tumor sample from the human subject before therapy with one or a plurality of reagents that detect expression and/or activation of predictive biomarkers for cancer; and determining a pattern of expression and/or activation of at least two of said predictive biomarkers, wherein the pattern predicts the human subject's response to the epidermal growth factor receptor-directed therapy.

2. The method of claim 1, wherein the predictive biomarker is a growth factor receptor, or a growth factor receptor-related downstream signaling molecule.

3. The method of claim 2, wherein the growth factor receptor is HER1 (EGFR), pHER1, HER2/neu, HER3, or any combination thereof.

4. The method of claim 2, wherein the growth factor receptor-related downstream signaling molecules is pERK.

5. The method of claim 2, wherein the growth factor receptor is HER1 (EGFR), pHER1, HER2/neu, HER3, or any combination thereof, and the growth factor receptor-related downstream signaling molecules is pERK.

6. The method of claim 1, where in the predictive biomarkers are HER1 (EGFR) and HER3.

7. The method of claim 6, wherein when HER1 (EGFR) is undetectable is predictive of the human subject not responding to the epidermal growth factor receptor-directed therapy.

8. The method of claim 6, wherein when HER3 is undetectable is predictive of the human subject responding to the epidermal growth factor receptor-directed therapy.

9. The method of claim 1, where in the predictive biomarkers are HER1 (EGFR) and pERK.

10. The method of claim 1, where in the predictive biomarkers are pERK and HER3.

11. The method of claim 1, where in the predictive biomarkers are HER1 (EGFR), HER3, and pERK.

12. A kit for determining a response to an epidermal growth factor receptor-directed therapy in a subject comprising at least two reagents that detect expression and/or activation of predictive biomarkers for cancer.

13. The kit of claim 12, wherein said kit comprises at least three reagents that detect expression and/or activation of predictive biomarkers for cancer.

14. The kit of claim 12, where the predictive biomarkers are HER1, HER3, pERK or any combination thereof.

15. The kit of claim 13, where the predictive biomarkers are HER1, HER3, pERK or any combination thereof.

16. A method for predicting a response to a cancer therapy in a human subject, the method comprising the step of assaying a cell or tissue sample from the human subject before therapy with one or a plurality of reagents that detect expression and/or activation of predictive biomarkers for cancer, wherein said predicative biomarkers consist of growth factor receptor ligands; and determining a pattern of expression and/or activation of at least two of said predictive biomarkers, wherein the pattern predicts the human subject's response to the cancer therapy.

17. The method of claim 16, wherein the growth factor receptors are HER1 (EGFR), pHER1, HER2/neu, HER3 or any combination thereof.

18. The method of claim 17, wherein the cancer therapy is an epidermal growth factor receptor-directed therapy.

19. The method of claim 18, wherein the cancer therapy is an anti-EGFR antibody.

20. The method of claim 19, wherein the antibody is ABX-0303.

21. A method of selecting a subject with cancer for treatment with a molecule targeting epidermal growth factor receptor (EGFR), comprising determining the level of expression of HER3 in a cell or tissue sample from the subject, wherein if the level of HER3 expression is low in the cells, the subject is selected.

22. The method of claim 21, wherein the molecule is an anti-EGFR antibody.

23. The method of claim 22, wherein the antibody is ABX-0303.

24. The method of claim 21, wherein the determining step further comprises determining expression of one or more of HER1 (EGFR), pHER1, HER2/neu, and pERK.

25. A method of predicting the likely response rate to a molecule targeting epidermal growth factor receptor (EGFR) of a subject having a cancer that overexpresses EGFR, comprising the step of determining the level of expression of HER3 in a cell or tissue sample from the subject, wherein if the level of HER3 expression is low in the cells, the subject is likely to respond to the molecule targeting EGFR.

26. The method of claim 25, wherein the molecule is an anti-EGFR antibody.

27. The method of claim 26, wherein the antibody is ABX-0303.

28. The method of claim 25, wherein the determining step further comprises determining expression of one or more of HER1 (EGFR), pHER1, HER2/neu, and pERK.

29. A method of treating a subject with cancer, comprising determining the level of expression of HER3 in the cells from the subject, and treating the subject with an anti-EGFR antibody when HER3 expression levels in the cell are low.

30. The method of claim 29, wherein the antibody is ABX-0303.

31. The method of claim 29 wherein the determining step further comprises determining expression of one or more of HER1 (EGFR), pHER1, HER2/neu, and pERK.

32. The method of claim 31, wherein the antibody is ABX-0303.

33. The method of claim 29, wherein the level of expression of HER3 is undetectable.

34. The method of claim 33, wherein the antibody is ABX-0303.

35. A method of selecting a subject with cancer for treatment with a molecule targeting epidermal growth factor receptor (EGFR), the method comprising:

a) determining an expression and/or activation profile of two or more growth factor receptors in cells and/or tissues of the subject; and

b) selecting the subject based on the expression and/or activation profile,

wherein the subject is selected when the level of expression of HER3 is low, the level of expression of the HER1 is high, and/or the level of the pERK index is high.

36. The method of claim 35, wherein the molecule is an anti-EGFR antibody.

37. The method of claim 36, wherein the antibody is ABX-0303.

38. The method of claim 37, wherein the growth factor receptors comprise one or more of HER1 (EGFR), pHER1, HER2/neu, and HER3.